DOE: [HYPERLINK "https://www.energy.gov/sites/prod/files/2017/01/f34/DOE%20Scientific%20Integrity%20Policy%2001112017.PDF"]

Policy : 1-4-2017

SI policy mainly addresses personal views and does not explicitly address any kind of differing scientific opinion procedure or protocol.

"These personnel are also free to share their personal views and opinions on scientific or technical related policy matters, provided they do not attribute these views to the U.S. Government…"

"…Covered personnel are free and encouraged to discuss their scientific work and research openly, whether in a scientific or a public forum or with the media, and to publish their findings. Covered personnel are free to discuss their personal opinions on scientific and technical related policies, provided these views are not represented as those of the U.S. Government or DOE…"

"…The DOE recognizes the right of covered personnel to express their personal scientific and technical views and related policy positions via digital media and permits covered personnel to use digital media to share information that may benefit the public's knowledge and awareness of scientific and technical information…"

DOC: [HYPERLINK "https://2010-2014.commerce.gov/sites/default/files/documents/2012/april/scientific_integrity_memorandum_dtd_2011-12-16.pdf"]

SI policy contains no mention of differing scientific opinion, nor of personal views. Policy only contains vague directives regarding public communications.

Memo : 12-16-2011

"This memorandum confirms that DAO 219-1 allows scientists to engage in oral fundamental research communications (based on their official work) with the media and the public without notification or prior approval to their supervisor or to the Office of Public Affairs. Electronic communications with the media related to fundamental research that are the equivalent of a dialogue are considered to be oral communications; thus, prior approval is not required for a scientist to engage in online discussions or email with the media about fundamental research, subject to restrictions on protected nonpublic information as set forth in DAO 219-1."

DOI: [HYPERLINK "https://www.doi.gov/scientificintegrity"]

Departmental Manual : 12-16-2014

The departmental manual contains a chapter on scientific integrity, which does not explicitly address a procedure for dealing with differing scientific opinions, but does encourage constructive, objective, valid and descript input regarding scientific research or products. The policy appears to also encourage a culture of open and candid discussion about findings and the process of peer review.

(7) I will clearly differentiate among facts, personal opinions, assumptions, hypotheses, and professional judgment in reporting the results of scientific activities and characterizing associated definable uncertainties, in using those results for decision making, and in carrying out public information activities.

B. Individuals Engaged in Scientific Activities

(5) I will welcome constructive criticism of my scientific activities and will be responsive to peer review.

(6) I will provide constructive, objective, and professionally valid peer review of the work of others, free of any personal or professional jealousy, disputes, competition, non-scientific disagreement, or conflict of interest resulting from financial interests or personal or business relationships. I will substantiate comments that I make with the same care with which I report my own work.

C. Decision Makers

(2) I will offer respectful, constructive, and objective review of scientific activities of employees I supervise and will encourage them to obtain appropriate peer reviews of their work. I will respect the intellectual property rights of others and will substantiate comments that I make about their work with the same care with which I carry out and report the results of my own activities.

DOL : [HYPERLINK "https://www.dol.gov/asp/ideascale/"]

Policy Statement: n.d.

The policy discerns between scientific misconduct or dishonesty and differing opinion and lays out instructions for how to communicate science to the public. There is not any explicit procedure for addressing DSO, just a tentative acknowledgment that it could exist.

"'Scientific information' means factual inputs, data, models, analyses, technical information, or scientific assessments based on the behavioral and social sciences, public health and medical sciences, life and earth sciences, engineering, mathematics, statistics, or physical sciences. This includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms. This definition includes information that an agency disseminates from a web page, but does not include the provision of hyperlinks to information that others disseminate. This definition does not include opinions, where the agency's presentation makes clear that what is being offered is someone's opinion rather than fact or the agency's views."

DOT : [HYPERLINK "https://www.transportation.gov/sites/dot.gov/files/docs/mission/administrations/assistant-secretary-research-and-technology/282391/scientificintegritypolicy.pdf"]

Memo: 04-10-2012

The policy does not explicitly address differing scientific opinion but includes the same boilerplate statement about scientific communication with the public as the DOE included. However, this policy does not seem to address personal views quite as explicitly and there seems to be more of an emphasis on experts or specialists interfacing with the fed gov't.

"Facilitate the free flow of scientific and technological information, consistent with privacy and classification standards. Open communication among scientists and engineers, and between these experts and the public, accelerates scientific and technological advancement, strengthens the economy, educates the Nation, and enhances democracy. Consistent with the Administration's Open Government Initiative, agencies should expand and promote access to scientific and technological information by making it available online in open formats. Where appropriate, this should include data and models underlying regulatory proposals and policy decisions."

USDA: [HYPERLINK "https://www.ocio.usda.gov/sites/default/files/docs/2012/Final%20-%20DM%201074-001%20Scientific%20Integrity.pdf"]

Departmental Manual: 11-18-2016

USDA's departmental manual includes a clause about inclusion of differing opinions in reports from ScI review panels, stating that consensus is preferable whenever possible, but that the minority viewpoint *may* be included in the final report. Otherwise, the manual does not address how to handle differing scientific opinions.

"The DSIRP will attempt to reach its findings and recommendations by consensus. If consensus cannot be reached on one or more of the recommendations, a majority vote will determine the DSIRP's final recommendation. All recommendations that are not reached by consensus must indicate the number of DSIRP members in favor of (majority) and the number opposed to (minority) the final recommendation. At the Chair's discretion, the final report may include a synopsis of the minority viewpoint"

CDC: [HYPERLINK "https://www.cdc.gov/od/science/docs/CDCSIGuide_042516.pdf"]

Policy Guide: April 2016

The CDC scientific integrity policy addresses personal views and disagreement that may arise during the clearance process but avoids providing procedures for dealing with these things by requiring individuals with differing views to express them as personal views and not views associated with the work of CDC or HHS. The CDC also recognizes scientific debate as important to the scientific process but does not go much beyond this in addressing DSO.

"Mechanisms to Resolve Disputes that Arise During Clearance Process In compliance with the Code of Conduct for CDC Media Relations Employees policy for Release of Information to News Media, CDC media relations employees are to be honest and accurate, respond promptly, and promote the free flow of scientific and technical information. "CDC employees who present personal or individual views must

make clear that they are presenting their personal or individual views—not the views of CDC or HHS—and they should not be sourced as a CDC or HHS representative in the piece." (CDC-CM-2009-01)

"CDC accepts scientific debate and respects the peer-review process."

CPSC: [HYPERLINK "https://www.cpsc.gov/About-CPSC/Policies-Statements-and-Directives/Policies-that-Implement-the-CPSC-Principles-Regarding-the-Integrity-of-CPSC-Staffs-Scientific-and-Technical-Work"]

Policy Statement: n.d.

Requires employees to differentiate between personal opinions and agency science but also supports a culture of open and honest communication as an important component of expanding scientific understanding and facilitating candid dialog.

The CPSC supports open, honest communication throughout the development and execution of its scientific and technical work, including the interpretation of data and the development of staff recommendations to the Commission. Managers, supervisors, and team leaders are expected to encourage and facilitate open, honest, and respectful communication among staff. Airing novel approaches, minority opinions, and concerns about data limitations or interpretations is supported and encouraged. Avenues for open, honest discussion and for resolution of scientific or technical conflicts on issues are available. Staff is encouraged to communicate and collaborate, as appropriate, with scientists, engineers, and other scientific and technical experts within and outside the CPSC. In planning, holding, and participating in meetings with other scientific experts, staff follows the Government in the Sunshine Act, the Administrative Procedure Act, as well as existing CPSC statutes, regulations (including the Commission's meetings policy), directives and practices.

FWS: [HYPERLINK "https://www.fws.gov/science/pdf/ScientificIntegrityFWSCode212fw7.pdf"]

General Administration Manual: 01-28-2008

see comments for DOI (wording is the same in both documents)

FDA: [HYPERLINK "https://www.fda.gov/media/71608/download"]

Policy document: 06-21-2019

Standalone policy document that lays out procedures for addressing differences in scientific or regulatory opinion. The stated goal is to reconcile differing opinions or find middle ground when disagreement arises and encourages the settling of disagreement through informal or formal processes.

"The purpose of this document is to describe the policies and procedures for addressing differences in scientific or regulatory opinion among staff from different FDA centers pertinent to decision-making. The

goal of this process is to resolve disputes at the center level through mutual agreement or, at a minimum, to reach alignment of the affected parties.

The dispute resolution process may proceed through either an informal or formal path. The agency strongly encourages staff to make every effort to address disagreements informally at the lowest possible organizational level. The formal process should be reserved for circumstances where informal efforts to address differences among staff in different centers have failed. The formal process may also be used when an expedited decision is required due to serious public health concerns."

NASA: [HYPERLINK "https://www.nasa.gov/pdf/611201main_NASA_SI_Policy_12_15_11.pdf"]

Policy document: 12-16-2011

NASA does not specify anything regarding differing scientific opinions in their scientific integrity policy, but they do include language about facilitating a culture of scientific integrity in the agency, which stresses honest investigation and freedom from political interference. However, nowhere in the document do they make mention of personal views or differing scientific opinions.

NIST: [HYPERLINK "https://www.nist.gov/summary-report-scientific-integrity"]

Policy Summary: 03-20-2017

NIST does not make specific mention of differing scientific opinion in their scientific integrity summary, nor of personal views. The document stresses the quality of the science released by the agency and provides assurances that uncertainty is documented anytime it is necessary to. However, the uncertainty clause seems to apply more to an industry standard for documentation than for an assurance that DSOs are accounted for.

"A key element of Scientific Integrity relating to scientific and technical research has to do with statements of uncertainty associated with measurement results. As the nation's primary Federal laboratory charged with advancing measurement science, standards, and technology, NIST has long recognized the critical role of rigorously applied uncertainty principles in the credibility of reported research, and especially of research that may underpin policy.

According to long-standing published NIST policy, a measurement result is considered complete only when accompanied by a quantitative statement of its uncertainty. NIST policy requires uncertainty statements, and also requires that a uniform approach to expressing measurement uncertainty be followed. To ensure that uncertainty statements are consistent with each other and with international practice, the NIST policy adopts the approach to expressing measurement uncertainty recommended by the International Committee for Weights and Measures (CIPM)."

NIH: [HYPERLINK "https://www.nih.gov/sites/default/files/about-nih/nih-director/testimonies/nih-policies-procedures-promoting-scientific-integrity-2012.pdf"]

Policy document: 11-01-2012

NIH does not specifically address DSO in their scientific integrity policy, but a discernment is made between an expression of a differing opinion (with that of the agency) from research misconduct. Additionally, NIH calls for personal views to be expressed as such and not as a reflection of the agency or its staff.

"Research misconduct does not include honest error or differences of opinion. All institutions receiving PHS funding must have written policies and procedures for addressing allegations of research misconduct"

"A clear distinction must be made between the presentation of scientific data and the presentation of opinion that may be construed as the position of NIH. … (1) information presented by NIH employees is considered and treated differently from that presented in other professional settings and (2) there is a clear distinction between the presentation of scientific data and opinion"

NOAA: [HYPERLINK "https://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_202/202-735-D.pdf"] & [HYPERLINK "https://nrc.noaa.gov/Scientific-Integrity-Commons/FAQs"]

Administrative Order: 12-07-2011

NOAA address scientific disagreement in their FAQs, stating that DSO does not fall under the umbrella of "research misconduct," much as NIH and others stated. The scientific integrity policy also makes explicit the personal views exception, that employees can express their expert or personal opinions to the public, so long as they make it clear that their views do not represent those of DOC or NOAA.

"NOAA scientists are free to present viewpoints, for example about policy or management matters, that extend beyond their scientific findings to incorporate their expert or personal opinions, but in doing so they must make clear that they are presenting their individual opinions – not the views of the Department of Commerce or NOAA. In such cases, NOAA personnel may also note their NOAA affiliation as part of their biographical information., provided that their NOAA affiliation is noted as one of several biographical details, or, if the information is being published in a scientific or technical journal, their NOAA affiliation may be listed with an appropriate disclaimer. Appropriate disclaimers for use by NOAA scientists when expressing such opinions will be posted to the Scientific Integrity Commons website."

"Any accusation must be substantiated with some evidence; otherwise the accusation will not go beyond the initial assessment. NOAA's Scientific Integrity Policy does not recognize disagreement with findings or the interpretation of the findings as a basis for filing a scientific integrity complaint, and so any complaint based on such a disagreement would be dismissed. And if the accuser lied about your methods or work quality in order to fabricate a complaint, the initial assessment and potential inquiry would

rapidly uncover the fraud. Note that the false accuser's unethical conduct would most likely have serious professional repercussions."

NSF: [HYPERLINK "https://www.nsf.gov/bfa/dias/policy/si/index.jsp"]

Policy suite: n.d.

NSF does not make specific mention of DSO in any of their policy documents related to scientific integrity. They also do not have a single, uniform scientific integrity policy but a suite of documents that cumulatively make up their "policy." Within the public communications & media policy that is part of this suite, they make allude to DSO falling outside the scope of their policy, stating that they deliberately have not created policy around personal opinions or materials not authored by NSF and not representing official agency views.

"*B. Information Not Covered*

- *Documents or multimedia materials not authored by NSF and not representing official views, including research supported by NSF funding;*
- *Opinions where the presentation makes it clear that what is being offered is personal opinion rather than fact or NSF's views;*
- *Information dissemination limited to government employees or agency contractors or grantees;*
- *Information intended solely for intra- or inter-agency use or sharing of government information, such as budget discussions, National Science Board and NSF deliberations, and other information that serves to assess the success in achieving the agency's objectives, programs, training materials, manuals, etc.;*
- *Information intended to be limited to public filings, subpoenas, or adjudicative processes."*

NRC: [HYPERLINK "https://www.nrc.gov/docs/ML1513/ML15132A664.pdf"]

Standalone DSO Policy: 08-11-2015

The NRC's DSO encourages a supportive culture for airing scientific disagreement from any employee that would like to make a conscientious expression of an opinion that differs from a staff view or management decision. The policy calls for an open and welcoming culture that promotes rigorous scientific debate and allows for a free and open exchange of views or ideas.

"It is the policy of the U.S. Nuclear Regulatory Commission to support a Differing Professional Opinion (DPO) Program that an employee or contractor (as defined in this directive, Section IV, "Applicability") can use when he or she has a conscientious expression of a judgment or position that differs from an established staff view, disagrees with a management decision or policy position, or takes issue with an

established agency practice involving technical, legal, or policy issues (including administrative or corporate support issues)."

"The NRC strives to establish and maintain an environment that encourages all NRC employees and contractors to raise concerns and differing views promptly, without fear of reprisal, through various mechanisms. The free and open exchange of views or ideas conducted in a non-threatening environment provides the ideal forum where concerns and alternative views can be considered and addressed in an efficient and timely manner that improves decision making and supports the agency's safety and security mission."

"All NRC employees and contractors are expected to discuss their views and concerns with their immediate supervisors on a regular, ongoing basis. These informal discussions should be sufficient to resolve most issues. However, if informal discussions do not resolve concerns, employees have various mechanisms for expressing and having their concerns and differing views heard and considered by management, including the Open Door Policy described in Management Directive (MD) 10.160, 'Open Door Policy,' and the Non-Concurrence Process (NCP) described in MD 10.158, 'NRC Non-Concurrence Process.'"

USGS: [HYPERLINK "https://www.usgs.gov/about/organization/science-support/survey-manual/50025-scientific-integrity"]

Policy document: 07-23-2015

Provides the standard protection in expressing personal views from research misconduct by differentiating these things and calls for personal opinions to be specified and differentiated from agency standpoints or views. Otherwise, no procedure is outlined for addressing DSO at the agency.

"I will clearly differentiate among facts, personal opinions, assumptions, hypotheses, and professional judgment in reporting the results of scientific activities and characterizing associated definable uncertainties, in using those results for decision making, and in carrying out public information activities"

"Scientific Misconduct. Fabrication, falsification, or plagiarism in proposing, performing, or reviewing scientific activities, or in the products or reporting of the results of these activities. Scientific misconduct does not include an honest error or differences of opinion."